Argument

35 U.S.C. § 112, First Paragraph, Enablement Rejection

The only issue on appeal is an alleged lack of enablement with regard to claims 69, 70, 79-83, 86-89, 91, and 92. The rejection is based on the Examiner's unsupported opinions concerning the claimed invention, which are admittedly not based on any art of record. The rejection moreover is based on a clearly erroneous enablement standard. Appellants respectfully submit that a disclosure, which is presumptively enabling, cannot be found to lack enablement based solely on bare opinion that is contrary to the evidence of record. Because the enablement requirement of 35 U.S.C. §112, first paragraph, has been met, Appellants respectfully request that the rejection be withdrawn or reversed.

There is no basis to interpret the phrase "an antibody" to be equivalent to "a single monoclonal antibody"

The rejection is premised on a specious argument that the phrase "an antibody" recited in the claims can only be interpreted as referring to "a single monoclonal antibody." The reasoning underlying this argument is founded on bare opinion that conflicts with all evidence of record.

The claims, which are drawn to immunoassay methods, refer to the use of "an antibody." The Examiner begins the process of claim interpretation by acknowledging an incontestable fact: that the phrase "an antibody" "encompass[es] both 'monoclonal antibody' and 'polyclonal antibody.'" Examiner's Answer, page 10. This fact, however, places the enablement rejection in a difficult position. The Examiner has also acknowledged that the present invention is enabling for "a cocktail of antibodies" (Examiner's Answer, page 3), and evidence provided by Appellants during prosecution establishes that a "polyclonal antibody" is just such "a cocktail" of antibody molecules produced by several clones of B-lymphocytes. Thus, it would appear that

the Examiner should concede that the claims are enabled, since a specification satisfies the enablement requirement if it discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the scope of the claim. MPEP § 2164.01(b).

Desiring to maintain the rejection, however, the Examiner now argues that a polyclonal antibody is not within the scope of the claims, despite having just admitted that it is encompassed by the plain language of the claims. The Examiner begins this reversal of position by taking issue with the clear definition of "polyclonal antibody" used in the art:

> [c]ontrary to Appellant's argument, a polyclonal antibody is not a mixture of different monoclonal antibodies.... A polyclonal antibody or polyclonal antibodies are antibody molecules having different specificities.

Examiner's Answer, page 10. The Examiner fails to cite to any objective evidence to support this statement. Moreover, this statement is in direct conflict with evidence of record describing the knowledge and understanding of the skilled artisan. Specifically, *The Dictionary of Cell Biology*, 2nd Ed., Academic Press, San Diego, 1995, defines polyclonal antibody as "an antibody produced by several clones of B-lymphocytes as would be the case in a whole animal... whereas a monoclonal antibody is the product of a single clone of B-lymphocytes" (emphasis added). This dictionary-based definition is consistent with evidence provided in a declaration of one of skill in the art, Dr. Kenneth Buechler, which states that the phrase "an antibody" does not refer to a single molecule of antibody, but rather is understood in the art to refer to a single population of antibody. Buechler declaration, paragraph 9. This understanding is also consistent with the use of the term "antibody" throughout the specification.

Having defined the term "polyclonal antibody" based on personal opinion rather than on the evidence of record, however, the Examiner next interprets the claims to remove such a "polyclonal antibody" from the claim scope:

> The definition of polyclonal antibody is thus, contradictory to Appellant's claim to an antibody that has specific binding to cTn in free cTn form, cTn in binary [form]..., and cTn in ternary form.

Id., page 10. No reasoning is provided for this conclusion, or why the skilled artisan would not consider a polyclonal antibody having the requisite specificity to be "an antibody." Nevertheless, the Examiner relies on this erroneous conclusion to remove subject matter that the Examiner has acknowledged is enabled from the scope of the claims.

As a result of this, the Examiner maintains the enablement rejection by arguing that, because a polyclonal antibody is allegedly not within the scope of the claims, only reduction to practice of a single monoclonal antibody having the required specificity is sufficient to enable the claims:

> Accordingly, for the specification to be enabled, it is required to provide a teaching that suggests an antibody to be monoclonal... and that has been fully and successfully characterized to bind one common epitope for each and all of the free cTn, binary complexed cTn, and ternaty complexed cTn.

Id., page 11.

Contrary to the Examiner's belief, the evidence of record establishes that the distinction between polyclonal and monoclonal antibody is not based on specificity, but rather on clonal origin. Although a "monoclonal antibody" (which is the product of a single B-lymphocyte) contains antibody molecules having the same specificity, a polyclonal antibody (which is simply the product of multiple B-lymphocytes) may contain antibody molecules of the same and/or different specificity. Both a monoclonal antibody and a polyclonal antibody are understood in the

context of the claims to be "an antibody," which is simply a population of antibody molecules. The Examiner has failed rebut Appellant's citation to *The Dictionary of Cell Biology* (referring to the proffered polyclonal antibody definition as "Appellant's argument" (Examiner's Answer, page 10)), and has improperly dismissed the Buechler declaration as "an opinion declaration of Appellant as an interested party" (*id*, page 11).

After dismissing this evidence of record, the Examiner chooses to rely on claim language in the present application that uses the phrase "one or more antibodies" to support the view that a polyclonal antibody does not encompass a mixture of monoclonal antibodies. Examiner's Answer, page 16. Appellants note that this is the first time this alleged support for the enablement rejection has been raised by the Examiner. Appellants note that claim 79 to which the Examiner refers describes a solid phase comprising "one or more antibodies." The use of "one or more antibodies" in this claim is an acknowledgement that more than one population of antibody may be present on such a solid phase, *e.g.*, in separate discrete zones. *See, e.g.*, specification, page 36, lines 4-21. The Examiner fails to explain how this evidence could possibly contradict the art accepted definition of a polyclonal antibody as "an antibody" that is a mixture of monoclonal antibodies.

Appellants respectfully submit that the tenets of claim analysis do not provide unfettered discretion to define terms based on nothing more than personal opinion. Rather, the interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach. MPEP § 2111. The Examiner acknowledges that the term "an antibody" as used in the context of the claimed immunoassays encompasses a polyclonal antibody. The claims, therefore, must necessarily encompass a mixture of monoclonal antibodies, because this is the scientifically accepted definition of a polyclonal antibody as demonstrated by all the evidence of

record. The Examiner acknowledges that the present invention is enabling for such "a cocktail of antibodies" (Examiner's Answer, page 3) but, by improper claim interpretation, excludes this subject matter from the claims. Because the Examiner's entire enablement analysis is based on an interpretation of the claims that is not supported by the specification or consistent with that which one skilled in the art would reach, the rejection under 35 U.S.C. §112, first paragraph, is fatally flawed from its very inception.

The enablement rejection is fatally flawed due to an erroneous enablement standard

The failure to properly interpret the claims is further compounded by the application of an improper legal standard for judging compliance with enablement requirement, which contends that only by actual reduction to practice of a single monoclonal antibody that binds to free, binary complex, and ternary complex forms of a cardiac troponin isoform can the present invention meet the enablement standard. This basis for rejecting the claims is made absolutely clear by the Examiner:

> for the specification to be enabled, it is required to provide a teaching that suggests an antibody to be monoclonal... and that has been fully and successfully characterized to bind one common specific conserved epitope for each and all of the free cTn, binary complexed cTn, and ternary complexed cTn.

Examiner's Answer, page 11 (emphasis added);

> Undue experimentation [sic] requires predictability and success, that it has been successfully made... in addition to direction or guidance presented.

Id., page 15 (emphasis added).

Appellants respectfully submit that this is not a correct legal standard. As noted in *In re Wands*, "success," such as the presence of working examples, is but one consideration in an enablement analysis; it is not the single determinative consideration as the Examiner asserts. *See*

also, MPEP § 2164.02 ("lack of working examples or lack of evidence that the claimed invention works as described should never be the sole reason for rejecting the claimed invention on the grounds of lack of enablement"). The Examiner provides no legal support for this heightened enablement standard.

Compliance with the enablement requirement is judged by certain well established principles. It is, for example, well established in the patent law that a specification is presumed to be enabling. Also, as stated in MPEP § 2164.04, "it is incumbent on the Patent Office... to explain why it doubts any statement in a disclosure, and to back up its assertions of its own with acceptable evidence or reasoning.... Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively accurate disclosure." Moreover, a broad allegation by an examiner that a disclosure is speculative, coupled with various difficulties that might be encountered in practice, is not a sufficient basis for requiring proof of operability. *In re Chilowsky*, 229 F.2d 457, 463 (CCPA 1956) (*n.b.*, this case was recently cited by the Board for precisely this proposition in *Ex parte Miyada*, Appeal No. 1997-3535, page 5. While not binding precedent on the Board, the *Miyada* decision is cited here as persuasive authority).

These fundamental principles are disregarded in the present case as evidenced by an enablement rejection based solely on a broad assertion that "the specification does not establish a direct correlation... which would lead the skilled artisan to say that the claimed method works for a single... antibody" (Examiner's Answer, pages 7-8), an assertion made without reference to any evidence or reasoning for questioning the teachings of the specification. In effect, the Examiner asserts that the specification is not to be believed; then improperly shifts the burden of proof to Appellant to prove enablement. For this reason, Appellants respectfully submit that the

Examiner's rejection is in conflict with the established principles of assessing compliance with the enablement requirement of 35 U.S.C. §112.

Because the enablement standard applied by the Examiner in the instant case is inconsistent with established legal principles, the rejection under 35 U.S.C. §112, first paragraph, is fatally flawed.

The rejection ignores evidence of record, instead relying solely on the Examiner's personal opinion

In the present case, the specification describes in detail what antibodies need to be produced and how antigens should be prepared and antibodies screened in order to obtain the antibodies described in the claims; all starting materials needed to obtain the antibodies are readily available; and all of the methods required to obtain the antibodies have long been considered routine in the art. Despite this, the Examiner maintains that enablement can only be acknowledged if a specific monoclonal antibody has actually been "fully and successfully characterized." Examiner's Answer, page 11. Leaving aside this fundamental flaw in the Examiner's analysis for the moment, Appellants have also provided a declaration of one of skill in the art, Dr. Kenneth F. Buechler, as further evidence of enablement of the claimed invention. In the declaration, Dr. Buechler provides a reasoned scientific explanation as to why the skilled artisan, using the specification as a guide and only routine methods that are well known in the art, could practice the instantly claimed invention using even a single monoclonal antibody.

The Examiner has not attempted to rebut Dr. Buechler's declaration or challenge the soundness of the reasoning underpinning the conclusions in the declaration. Instead, the declaration is dismissed for failing to prove reduction to practice of the invention "in the form of data, that supports generation, selection, and use of this antibody" (*see, e.g.*, Paper No. 15, page

10), thus maintaining the rejection based solely on the lack of a working example and without providing any reasoning or evidence to counter the declaration. In the Reply Brief, the Examiner further denigrates the Buechler declaration as "an opinion declaration of Appellant as an interested party." Examiner's Answer, page 11.

As stated in MPEP § 2164.05, a declaration or affidavit is, itself, evidence that must be considered, and the evidence need not be conclusive, but merely convincing to the skilled artisan. Against the weight of this declaration, the Examiner offers nothing in rebuttal, since "[n]o prior art is relied upon by the examiner in the rejection of the claims under appeal." Examiner's Answer, page 3. The Examiner's decision to ignore the Buechler declaration in favor of personal opinion runs afoul of MPEP § 2164.05, which states that "[t]he examiner should **never** make the determination based on personal opinion" (emphasis in original). Appellants respectfully submit that the Buechler declaration is evidence that must be considered and not dismissed in favor of the Examiner's unsupported personal opinion.

The instant claims meet the enablement standard of 35 U.S.C. § 112, first paragraph

The enablement rejection is improperly founded on flawed reading of the claims which would remove subject matter that the Examiner acknowledges is enabled (*i.e.*, excluding a mixture of monoclonal antibodies from the phrase "an antibody"). Furthermore, a presumptively accurate specification and declaratory evidence from one of skill in the art have been ignored in favor of the Examiner's unsupported personal opinion that the claims are not enabled, the latter reached by applying an improperly heightened standard for enablement. When the evidence of record is properly considered and judged under the appropriate legal standard, the conclusion is inescapable that the rejection for enablement is improper and should be withdrawn. In view of

the foregoing, Appellants respectfully submit that that the present claims meet the enablement standard of 35 U.S.C. § 112, first paragraph.

Conclusion

For the reasons discussed above and in the Appeal Brief, Appellants respectfully submit that all the claims are in condition for allowance, and respectfully request that the rejections be withdrawn or reversed, and that the claims be allowed to issue.

Respectfully submitted,

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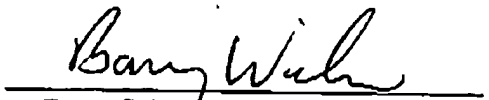
By: 

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